

*Instruction Book*

Photographing

*with the*

**Pathex**

Motion Picture

**Camera**

**PATHEX, Inc.**

*A Subsidiary of Pathe Exchange, Inc.*

1 Congress Street, Jersey City, N. J

# NOTE



All the information given in this booklet is for the Pathex automatic camera (that is camera equipped with automatic drive). This information stands good for the Hand Driven camera with the following exceptions:

- 1st: The camera must be cranked evenly and at a speed of two turns of the crank per second, so as to obtain pictures with normal motion.
- 2nd: For photographing, the camera must be set on the tripod and must be set straight.
- 3rd: The meter has 11 divisions; each division equals 100 frames or  $2\frac{1}{2}$  feet of film. (Each foot of film exposed contains 40 frames.)

**T**HE PATHEX MOTION PICTURE CAMERA, the product of many years of study and research by the internationally known firm of Pathe, is designed to meet every demand of the amateur motion picture photographer. Simplicity of operation and accuracy of adjustment have been brought to perfection, but, as in all branches of photography, certain fundamental rules must be followed to secure the best results, the principal of these being:

- (a) Photograph only when the light conditions are good and bright.
- (b) Consult the Exposure Chart before photographing any scene.
- (c) Frame accurately. (See how to use view finder.)
- (d) Panoram or tilt camera very slowly.
- (e) Hold camera steady. (See the way of holding camera.)
- (f) Clean lens often with a soft cloth or chamois.
- (g) Do not leave camera in damp, or in over-heated place.
- (h) Keep chamber of camera and film tracks clean and free from rust.

If the following simple rules are adhered to, anyone without previous experience can make successful motion pictures with a Pathex motion picture camera.

**General Information**—The lens on the front of the camera is an f3.5 anastigmatic 20 mm. focus. It has a fixed focus permitting the photographing of any object at a minimum distance of 5 feet. For photographing objects

at 3 to 5 feet distance a "portrait attachment" must be affixed to this lens. This lens has an iris diaphragm which can be regulated by moving the pointer on the side of the lens; at f3.5 the diaphragm is wide open thus permitting the greatest amount of light to pass through the lens. The EXPOSURE CHART which is supplied with Pathex camera will show the proper opening of diaphragm to be used in accordance with light conditions and the object to be photographed.

To the left of the lens is the starting button M, (fig. 1) push up to start automatic drive, and push down to stop.

On the left is the winding key L (fig. 1), which must be turned in direction of arrow.

Above the winding key is the auxiliary starting knob O (fig. 1), which will help start the motor if it fails to start by itself—it is very seldom that this will happen.

Above the auxiliary starting knob is the meter indicator N, (fig. 1) to register the amount of film exposed so that operator will know how much more there is left to be exposed. This meter can be set by turning either left or right; it has 10 divisions, each one is equal to 95 frames or images or 2' 4½" of film. When the pointer has made a complete revolution of the dial,

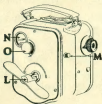


Fig. 1

the amount of film exposed will be 950 frames or images or 23' 9" of film.

On top of the camera is the "view finder." This is composed of two parts P, and Q, (fig. 2). For taking pictures raise vertically these two parts P, and Q, as shown in figure 2, and with the eye within about one inch of the rear view finder (P) sight through the rear

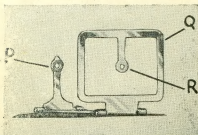


Fig. 2

view finder (P) and the front view finder (R) directly at the object to be photographed and in that position whatever you see within the frame (Q) will be photographed on the film.

To open the camera press the metal button located just beneath the lens. The film chamber is now before you. The film gate will open by pressing the little button A (fig. 3), with a pencil point.

It is not necessary to open the film gate to load the Pathex, and it should not be opened except for the

purpose of cleaning the film track B and the pressure plate C, (fig. 3).

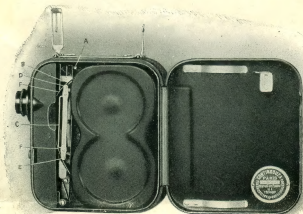


Fig. 3

*NOTE—The film track B and the pressure place C, must be cleaned frequently with a bone scraper (never with a knife).*

With the film gate open, you will observe the claw F, (fig. 4) that will engage the perforations in the film and will draw it out of the magazine at a speed of approximately sixteen frames or images per second.

Note also the ratchet G, (fig. 4) of the take up mechanism which will wind the film up automatically

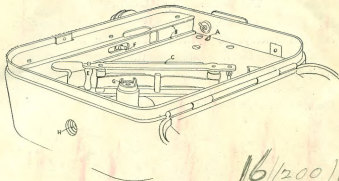


Fig. 4

16/1200 173.  
H2  
80  
4

as fast as it is exposed in the magazine; a small spring in the back of the ratchet allows the proper tension.

The Pathex film is non-inflammable and measures approximately  $9\frac{1}{2}$  mm. in width and 30 feet in length, it has a very rapid emulsion and when developed in reversible baths it will show a very clear and sharp positive image. There are 40 frames or images per foot.

The film magazine must not be opened, it is to be mailed to a Pathex laboratory for free developing after film has been exposed in Pathex camera. It should be kept in medium temperature as much as possible, that is away from heated radiators, or very cold places and kept wrapped up in red paper and original cardboard box.

## TO OPERATE CAMERA

Remove the wax red paper from the magazine. Do not attempt to open the magazine as to do so would expose the film and spoil it. Preserve the waxed red paper for re-wrapping the magazine immediately after film has been exposed in the camera. Avoid exposing the magazine to strong sunlight.

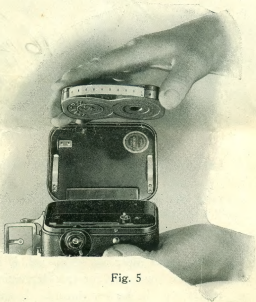


Fig. 5

Hold the camera with cover open and magazine as indicated in fig. 5. With the magazine held in this position



place it in the magazine chamber and at the same time pass the strip of film projecting from the magazine over the rollers D and E (fig. 6) so that the film will lie in the film track B, (fig. 4) and under the pressure plate C, as shown in (fig. 6).

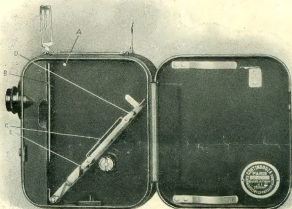


Fig. 6

After the film is put in the film track, push the edge of the film with your fingernail so that it gets embedded beneath the indented part on black plate. Close the Camera, wind the spring by turning key in direction of arrow (fig. 7). Adjust diaphragm aperture with pointer underneath the lens, according to instructions of EXPOSURE CHART supplied with Pathé Camera.

Set meter indicator N (fig. 7) to zero. Hold Pathex Camera tight with both hands and right against your face keeping *elbows well pressed against your body* to obtain the maximum rigidity. (See Fig. 8.)



Fig. 7

With finger push up button M (fig. 7), aim at your subject through the view finder and *very slowly* move the camera as you follow the subject you are photographing. Be sure when moving camera either sideways, or up and down to do so *evenly* and *very slowly*. When Automatic Drive stops, first part of film contained in magazine has been exposed ( $1/3$  of total length), push down button M (fig. 7), and rewind Automatic Drive. Proceed in the same manner for the second part and again for the last part of film in magazine. If, after having pushed down Button M, the motor fails to start (which will very rarely happen) you can help start motor by turning milled knob O, just half a turn to the right as indicated by arrow.

Though not necessary, it is better that Automatic Drive be rewound after each scene.

When the whole film has been exposed, open camera, place one hand on face of magazine, turn camera upside down and magazine will fall out in your



Fig. 8

hand. Wrap this magazine immediately in red wax paper and put in its cardboard box. When ready to have it developed, print very plainly your name and address, put sufficient stamps for first class mail and drop in mail box.

The developed film will be returned to you very shortly—without charge—mounted on a Pathex Spool, ready for projection.

SNAPSHOTS can easily be taken with the Pathex Camera. Simply allow automatic drive to run about one second, this will expose about 10 frames or images. After the film has been developed, a notch or two made with the Pathex notcher on the side of the film will allow a sufficiently long view on the screen.

## The Portrait Attachment

This is a special lens which is placed in front of lens of the Pathex Camera for the purpose of making close-ups or photographing any person or object at a distance of from 3 to 5 feet.

No object should be taken closer than 5 feet to the camera without this attachment.

When taking pictures with this attachment, the upper part of the subject to be photographed must appear in the view finder of the camera slightly lower than usual. Therefore incline very slightly towards the sky the front part of the camera.

Keep the lens of the portrait attachment clean and free from finger marks.

# The Yellow Light Filter

This is a specially tinted lens to be mounted in front of camera to be used as directed in Exposure Chart or for taking clouds, or ocean or snow pictures when the sun is bright. This lens must be kept clean and free from finger marks.

## The Sun Shield

This is an extension to be mounted on the lens of the Pathex Camera when photographing with the sun facing the lens of the camera; with its use better pictures will be obtained.

## The Pathexgraph

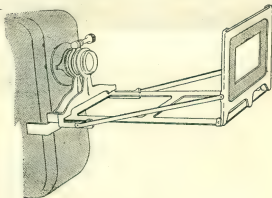


Fig. 9

The Pathexgraph is a small device to be attached to Pathex Camera for the purpose of tilting any view

or subject just before photographing the same. When the film is to be projected on the screen, the titles will enable the audience to follow with more interest and accuracy the different scenes of the picture. Anyone can use the Pathexgraph. It does not require any special knowledge—its handling is simple.

*Directions*—Figure 10 is an explanatory schema of the Pathexgraph.

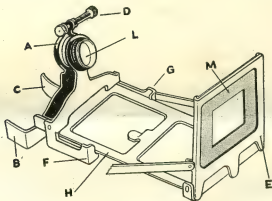


Fig. 10

Raise vertically ring A and insert same on lens of camera, taking care that guides B and C engage on sides of camera—tighten thumb screw D—raise the card holder in order to bring same to a vertical position and pull same backwards in order that the two brackets F and G grip on base H. This will automatically bring the lens L in alignment with the lens of the camera.

To make titles, insert a piece of white cardboard, 2" x 2" in card holder. (Insert so that white card hides vignette M from lens.) Write title (about 5 or 6 words) very legibly with black ink or very black lead pencil on the white card and within the frame of vignette M. When title is written, lift and remove white card and replace it in card holder with writing facing lens (Vignette M hidden from lens by white card.)

Lens aperture of camera must be set to 3-5. (Loosen thumb screw D to permit setting of lens aperture.)

Start Automatic Drive and allow same to run about one second.

After title has been photographed, bring down card holder to horizontal position—set lens aperture on camera in accordance with directions on exposure chart and photograph subject.

To open camera without taking off Pathexgraph, raise horizontal part of frame until guides B and C are disengaged from sides of camera.

After film has been developed, by using notcher as explained in instruction book of Pathex projector the title will remain projected on the screen sufficiently long enough to be easily read.

N. B.—Keep lens on Pathexgraph free from dust or finger marks by using chamois or soft cloth.

# Automatic Drive

The drive can easily be separated from the camera for persons desiring to make special study pictures. For separating camera from automatic drive the illustration (fig. 11) shows how they come apart; simply unscrew a little screws C and D which are on nickle-plated shoulders E and F, unscrew and take off big screw underneath base H. Pull Camera and Automatic drive apart. You may afterward unscrew driver B and use in its place the crank handle. If driver B does not unscrew easily, just knock slightly on the end of its wing with a small mallet or handle of a crew driver.

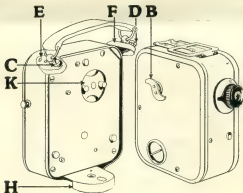


Fig. 11

To attach drive to camera again, reverse procedure outlined above.

## Service Information

It should always be remembered that the Pathex Motion Picture Camera is a precision apparatus of the highest degree, accurately and sturdily built as a fine watch, and like a watch, only ordinary care is necessary for it to function properly at all times.

Little difficulties that sometimes confront you, and which to you might appear serious, are as a rule only trifling and easily corrected by knowing just where to locate the trouble.

To assist you in the perfect enjoyment of your Pathex Camera for years to come, we offer the following suggestions as little helps in operating your Pathex Camera.

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When the Pathex camera fails to work properly, it is very seldom due to the camera itself but in most cases the fault lies with the magazine or the improper manner in which the film has been loaded in the camera.

**CLAW FAILS TO PULL THE FILM:** This might be due to any of the three following causes.

**A:** The film is too tight in the upper chamber of the magazine.

**B:** The flat spring of the pressure gate has been displaced and fails to bring equal pressure on the top and bottom of pressure frame.



C: The film has not been loaded properly, causing it to be slightly pinched between the edge of the film track and the edge of the film gate.

*As a remedy for the three above cases we suggest:*

A: Before putting the magazine in the camera, pull out from the upper chamber a little of the film (one or two inches at the most) and push the same portion right back. This will ease up the film in coming out later on.

If in pulling out the film by hand too great a resistance is felt, this shows that the film has unrolled itself inside of the magazine, and in such a case it is better not to try to use that magazine but to return same to us as it might give trouble in operating. The unrolling of the film is due to too much shaking in transportation or to climatic conditions.

B: If the flat spring on the back of the film gate is out of place it can be put back without difficulty or special knowledge. Just a look at the gate and spring will show where the trouble lies.

C: After the film is put in its place in the film track, push the edge of the film with your finger nail so that it gets embedded beneath the indented part on black plate.

**FILM BUCKLING:** If the film buckles after having passed through the film track, that is buckles at the lower part of the film gate, this may be due to either of the two following causes:

D: The hub inside of the magazine has been bent, or the film has become detached from the hub.

E: The take-up ratchet of the camera which engages inside of the hub of the magazine may not work properly due to the fact that the tension of the spring which is in back of the ratchet is insufficient.

*To remedy the two above cases, we suggest:*

D: In case the hub is faulty, it should be replaced by a new one. If the film has been detached from the hub, it should be reattached to it. Either of these two operations have to be done in a dark room, as it is necessary to open the magazine for that purpose.

E. If the tension of the ratchet is not sufficient, it is necessary to unscrew the split nut which is in the middle of the ratchet; take off that nut—then the spring, and stretch on the spring in order to give it a little more tension and then replace the spring and nut.

### AUTOMATIC DRIVE FAILS TO START:

When using the camera with the automatic drive, it might happen that the automatic drive will fail to work. This might be due to either of the four following causes:

F: The magazine box has not been closed tight when the film was put inside.

G: One of the sides of the aluminum case of the camera has been bent either by shock or too great pressure applied to it.

H: The underneath part of the knurled starting button touches the nickel plated escutcheon of the film meter.

I: The underneath part of the driver attached to the camera and which takes the place of the crank handle touches the nickel plated escutcheon.

*The remedies for these will be as follows:*

F: Close up the film magazine tighter by simply pressing same between the fingers on each of the four corners.

G: If the case of the camera has been bent, it is best to send same back to us for repair as the mechanism has to be taken apart.

H: Just bend slightly the edge of the escutcheon of the meter or just put a little piece of either metal, wood or paper inside of the starting button (unscrew same before doing this) in order to prevent it from screwing so far down.

I: Unscrew driver and insert in same a little piece of thin cardboard; this will prevent it from screwing so far down and from coming in contact with the escutcheon.

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NOTE: If the picture happens to be out of focus slightly on the side this is due to the fact that the film has not been placed correctly in the film track. See that film is always embedded as explained above at C.

